

## Using Existing and Planned Permanent BMPs for Water Pollution Control

Permanent Best Management Practices (BMPs) are easily overlooked as measures for controlling water pollution during construction activity. This bulletin reviews strategies for getting the most out of permanent BMPs on the construction site for water pollution control - both existing BMPs and those planned for post-construction implementation.

### **Existing BMPs – Why Not Use What 's Already There ?**

Typically, permanent BMPs consist of drainage conveyances such as storm drain systems, culverts, channels, asphalt concrete dikes, detention basins, swales, curbs, and gutters.

With forethought and planning, existing drainage conveyances can be used to transport storm water from the project site in a non-erosive manner.

#### **For example:**

- Use asphalt concrete dikes at the top of a slope to divert flows to existing storm drains instead of allowing runoff to flow down disturbed or vegetated slopes.
- Maintain concrete swales and curbs and gutters scheduled for demolition as long as feasible so that they can be used to transport runoff.

Established vegetation acts as a natural storm water filter and velocity dissipater for storm water flows. Implementing BMP SS-2, Preservation of Existing Vegetation, also reduces the size of disturbed soil areas and the amount of potential sediment during construction.

- Ensure that plans and schedules preserve existing vegetation until clearing and grubbing or other earth-disturbing activities must begin.
- Install temporary orange polypropylene fencing and linear barriers to mark areas to be preserved.
- Maintain existing irrigation systems.

Note that *directing* sediment-laden site runoff to existing vegetation has the potential to damage it, and should be avoided.

### **Post-Construction BMPs - Putting Them to Work for You**

Early implementation of permanent BMPs, such as the following, can also benefit water pollution control during construction:

- Highway planting and landscaping.
- Landscaped drainage features, such as vegetated swales and berms.
- Drainage conveyances.
- Detention basins.
- Slope paving as part of contract plans.

Early implementation of planting and erosion control is particularly beneficial on larger projects as specific areas of work are deemed substantially complete, rather than as a single effort after completion of all construction.

### **The Up Side**

Using existing or planned permanent BMPs has the following advantages:

- It reduces the contractor's cost in time and materials for implementing and maintaining temporary BMPs.
- Unlike temporary BMPs, permanent BMPs do not have to be removed at the completion of construction.
- Permanent BMPs are highly efficient for controlling water pollution when properly designed and installed.
- Using existing BMPs helps prepare the project for the rainy season.



The vegetation adjacent to this active construction area remains undisturbed, thus reducing erosion



Early construction of permanent detention basins can be useful for temporary water pollution control

**Implementation Details**

- The contractor has to include permanent BMPs in the schedule and in pre- construction planning.
- During construction,temporary BMPs will still be needed in areas not served by the permanent BMPs.
- For implementation of permanent BMPs in phases,the contractor will have to schedule multiple move-in/move- out operations,e.g.,erosion control measures.

**Maintenance Requirements**

During the construction period,the contractor is required to inspect and maintain permanent BMPs on the same schedule as temporary BMPs:

- Prior to a forecast storm.
- After any storm from which runoff leaves the site.
- At 24-hour intervals during extended storm events.
- As required by the contract special provisions.

At project closeout,ensure that the contractor has completed final cleanout or final maintenance of permanent BMPs so that they are in a clean state of condition.



STORM WATER HOME